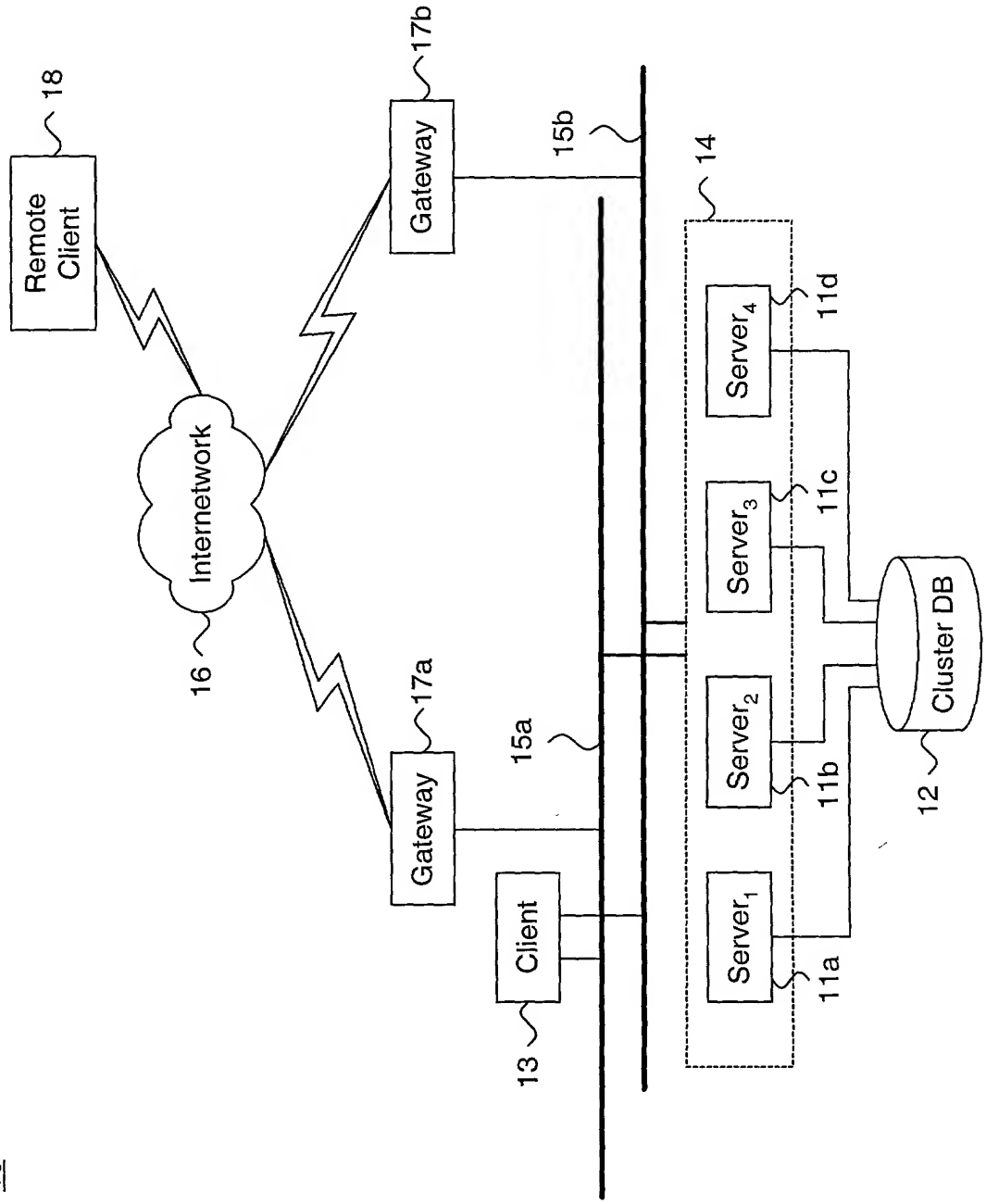
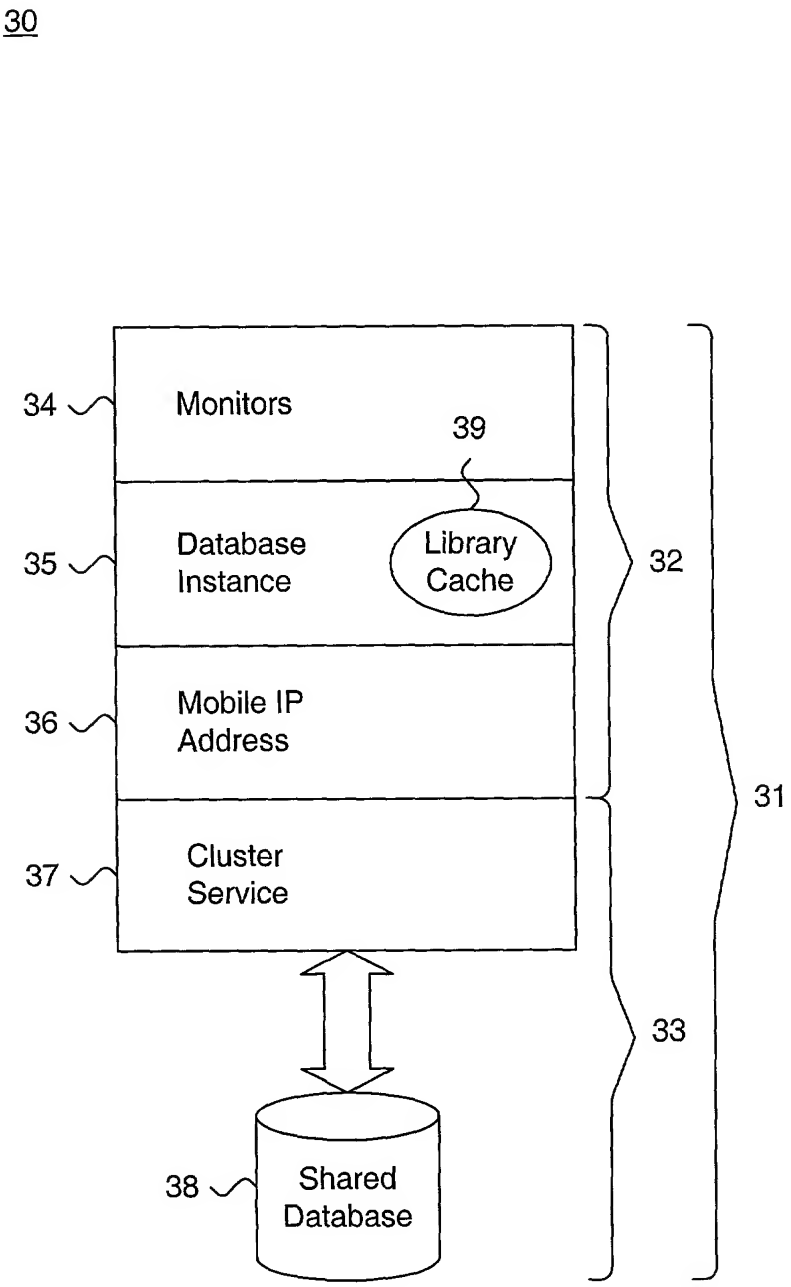

10
Remote Client
18
Internetwork
16
Gateway
17b
Gateway
17a
15b
15a
14
Server$_4$
Server$_3$
Server$_2$
Server$_1$
11d
11c
11b
11a
Cluster DB
12
Client
13

Figure 1.

Figure 2.


30
34
Monitors
39
35
Database Instance
Library Cache
32
36
Mobile IP Address
31
37
Cluster Service
33
38
Shared Database

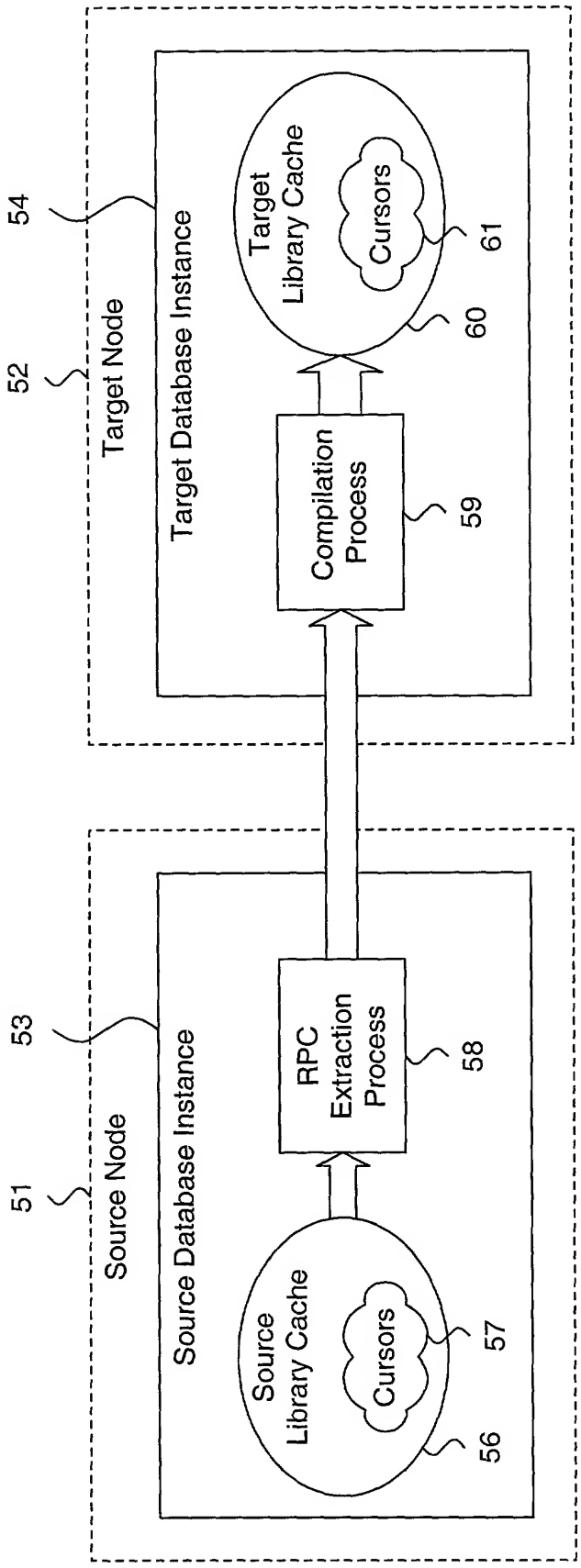

50
51
Source Node
53
Source Database Instance
Source Library Cache
Cursors
56
57
RPC Extraction Process
58
52
Target Node
54
Target Database Instance
Target Library Cache
Cursors
60
61
Compilation Process
59

Figure 3.

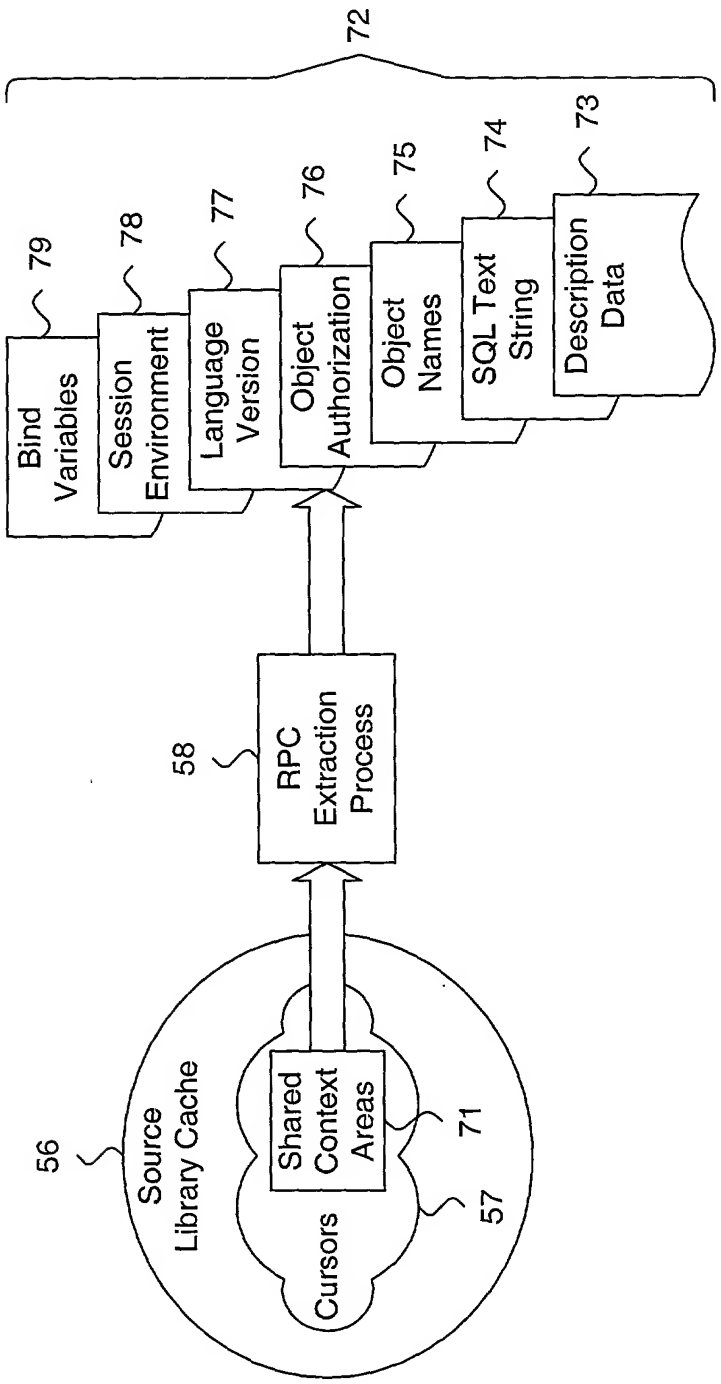

70
56
Source Library Cache
Cursors
Shared Context Areas
57
71
58
RPC Extraction Process
72
Bind Variables
79
Session Environment
78
Language Version
77
Object Authorization
76
Object Names
75
SQL Text String
74
Description Data
73

Figure 4.

Figure 5.

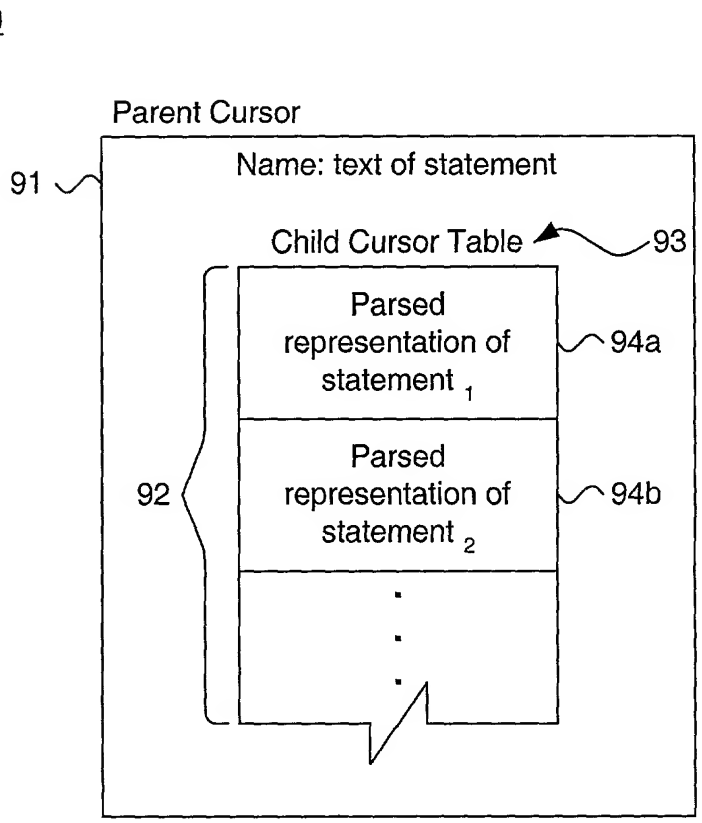

90
Parent Cursor
91
Name: text of statement
Child Cursor Table
93
Parsed representation of statement 1
94a
92
Parsed representation of statement 2
94b

Figure 6.

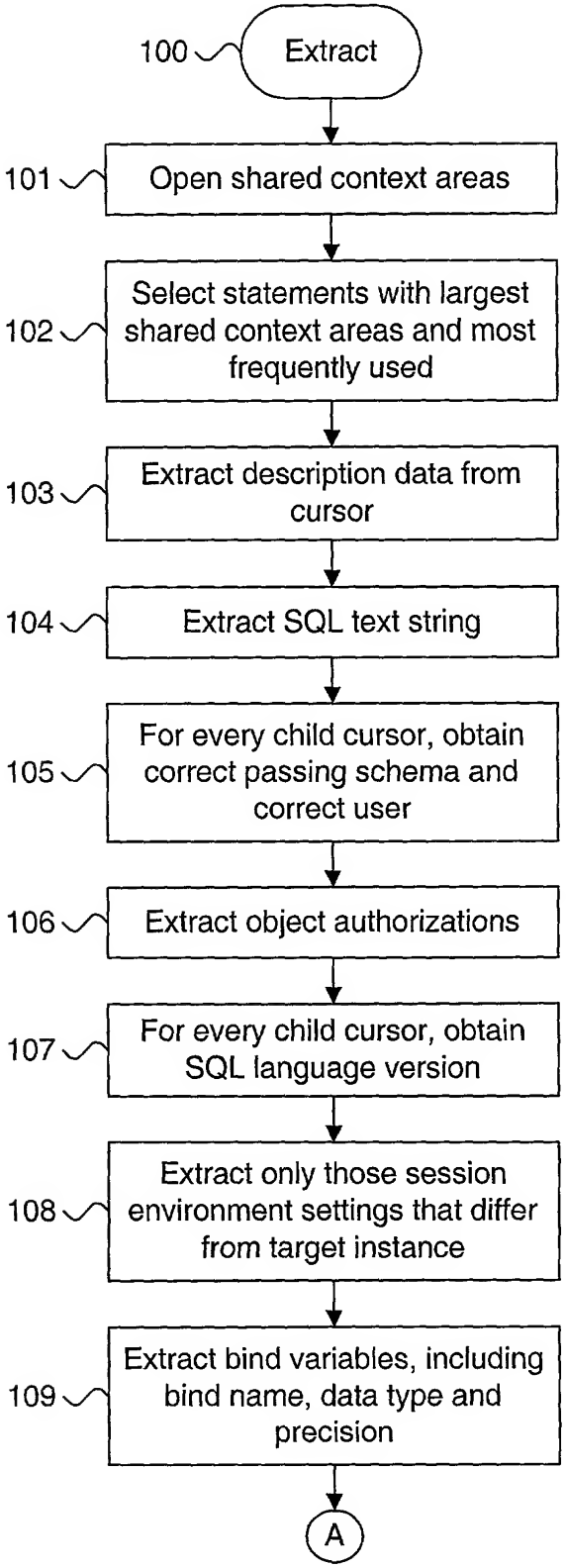

100
Extract
101
Open shared context areas
102
Select statements with largest shared context areas and most frequently used
103
Extract description data from cursor
104
Extract SQL text string
105
For every child cursor, obtain correct passing schema and correct user
106
Extract object authorizations
107
For every child cursor, obtain SQL language version
108
Extract only those session environment settings that differ from target instance
109
Extract bind variables, including bind name, data type and precision
A

Figure 6. (cont.)

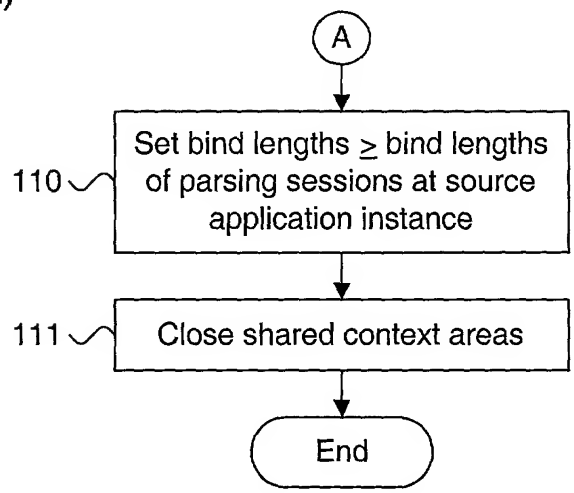


Figure 7.

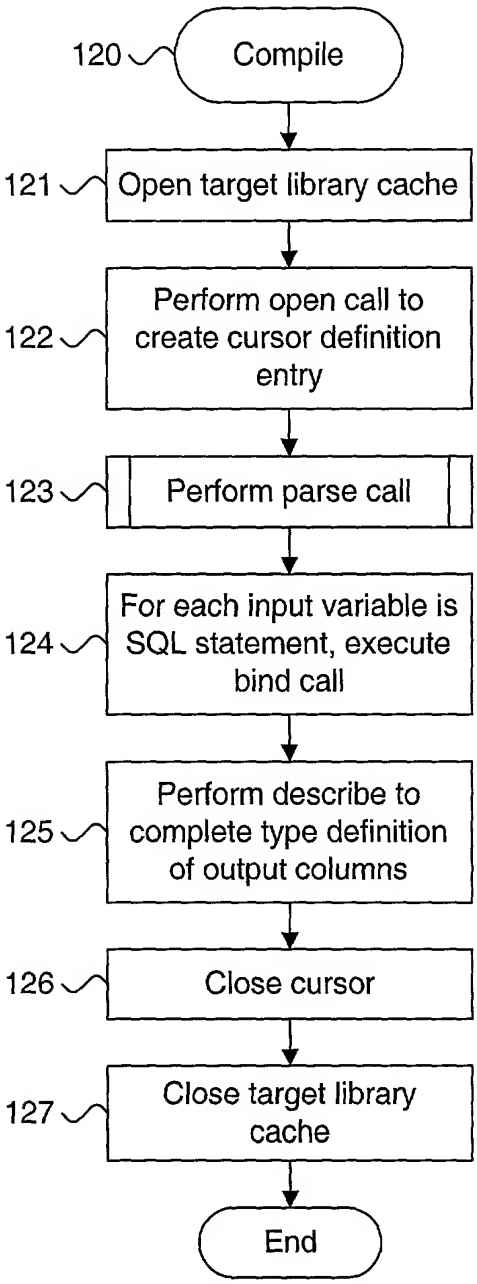

120
Compile
121
Open target library cache
122
Perform open call to create cursor definition entry
123
Perform parse call
124
For each input variable is SQL statement, execute bind call
125
Perform describe to complete type definition of output columns
126
Close cursor
127
Close target library cache
End

Figure 8.

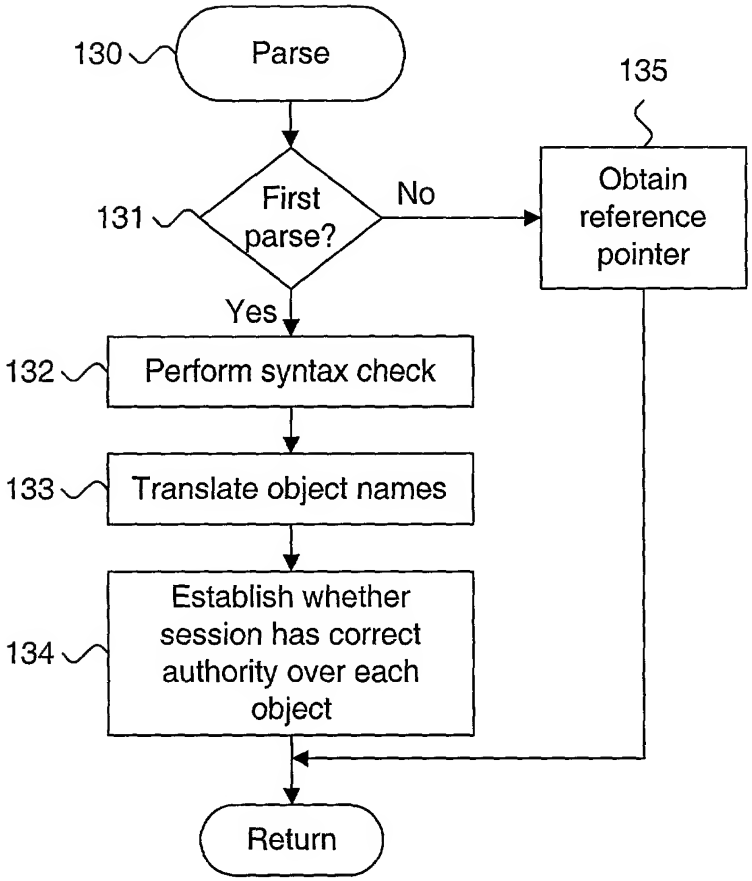

130
Parse
135
131
First parse?
No
Obtain reference pointer
Yes
132
Perform syntax check
133
Translate object names
134
Establish whether session has correct authority over each object
Return

Figure 9.

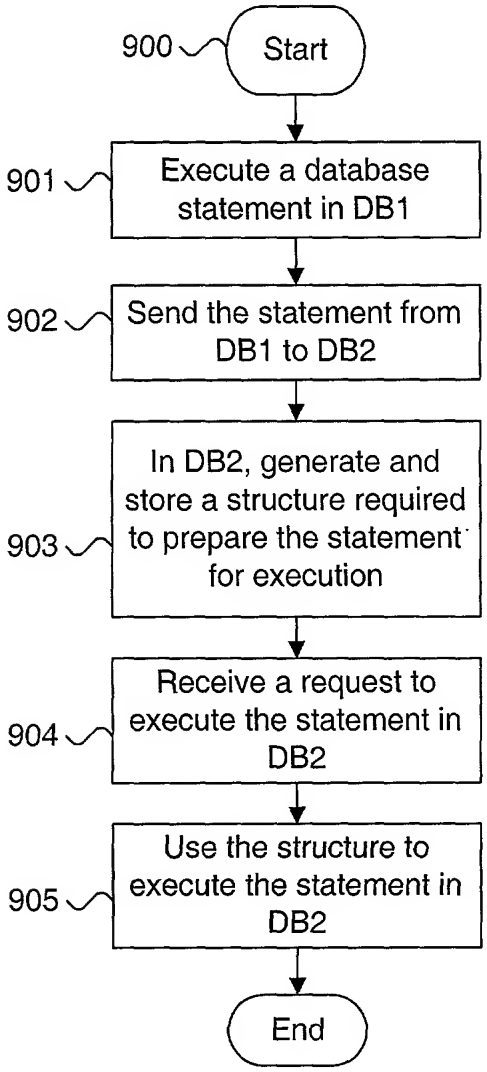
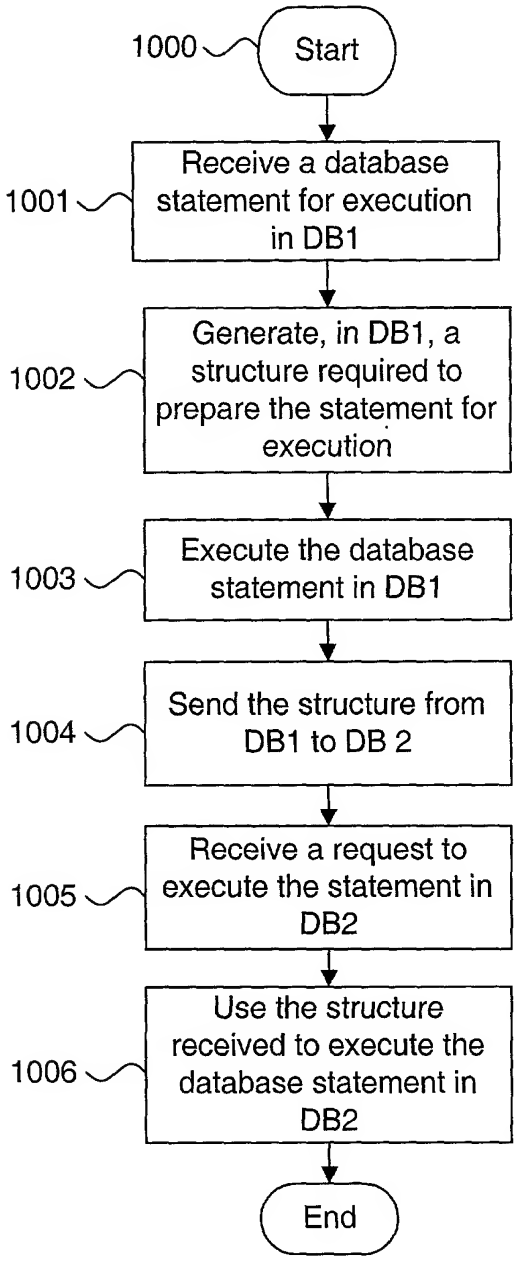

900
Start
901
Execute a database statement in DB1
902
Send the statement from DB1 to DB2
903
In DB2, generate and store a structure required to prepare the statement for execution
904
Receive a request to execute the statement in DB2
905
Use the structure to execute the statement in DB2
End

Figure 10.


1000
Start
1001
Receive a database statement for execution in DB1
1002
Generate, in DB1, a structure required to prepare the statement for execution
1003
Execute the database statement in DB1
1004
Send the structure from DB1 to DB 2
1005
Receive a request to execute the statement in DB2
1006
Use the structure received to execute the database statement in DB2
End